

## **CURRICULUM VITAE**

### **PERSONAL INFORMATION**

**Full Name:** Cecilia Elena Mateu Jiménez  
**Birth date:** October 9th, 1982  
**Place of Birth:** Caracas, Venezuela  
**Nacionality:** Venezuelan  
**Correo Electrónico:** cmateu@cida.ve

### **EDUCATION**

#### **1. Postgraduate Studies**

Universidad Central de Venezuela  
Degree: Doctorado en Física (Doctor in Physics)  
Date of Culmination: Nov-2011

Thesis: "Characterization of the population of Galactic Thick Disc RR Lyrae stars" ("Caracterización de la Población de RR Lyrae en el Disco Grueso de la Vía Láctea"). Advisor Ph.D. A. Katherina Vivas (CIDA)

#### **2. Graduate Studies**

Universidad Simón Bolívar  
Year of Culmination: 2005  
Degree: Licenciado en Física, Mención Cum Laude

Thesis: "Study of stellar populations and search for RR Lyrae stars in the Canis Major overdensity" ("Estudio de poblaciones estelares y búsqueda de estrellas RR Lyrae en la sobredensidad de Can Mayor"). Advisor: Ph.D. A. Katherina Vivas (CIDA) and Ph.D. Ignacio Taboada (USB). Aprobada con Mención Sobresaliente.

### **CURRENT POSITION**

Centro de Investigaciones de Astronomía "Francisco J. Duarte" (CIDA), Assistant Researcher, since 12/2015

### **PROFESSIONAL EXPERIENCE**

- 09/2015-12/2015** Centro de Investigaciones de Astronomía "Francisco J. Duarte" (CIDA). Postdoctoral Researcher
- 09/2013-09/2015.** Instituto de Astronomía, Universidad Nacional Autónoma de México. Postdoctoral Researcher (DGAPA)
- 02/2011-08/2013** Centro de Investigaciones de Astronomía "Francisco J. Duarte" (CIDA). Postdoctoral Researcher

## REFEREED PAPERS

1. "Predictions for the detection of Tidal Streams with Gaia using Great Circle Methods". **Mateu, Cecilia**; Cooper, Andrew; Font, Andreea S.; Aguilar, Luis; Frenk, Carlos; Cole, Shaun; Wang, Wenting; McCarthy, Ian G. *Monthly Notices of the Royal Astronomical Society*, **2017**, Vol. **469**, No.1, **721-742**
2. "The rotation period distribution of 4-10 Myr T Tauri stars in Orion OB1: New constraints on PMS ang. mom. evolution". Tanveer Karim, M.; Stassun, K.; Briceño, C.; Vivas, K.; Raetz, S.; Calvet, N.; **Mateu, C.**; Downes, J. J.; Hernandez, J.; Neuhauser, R.; Mugrauer, M.; Takahashi, H.; Tachihara, K.; Chini, R.; Cruz-Dias, G.; Aarnio, A.; James, D.; Hackstein, M. *The Astronomical Journal*, **2016**, Vol.152 No. 6, 198-210.
3. "Detection of satellite remnants in the Galactic halo with Gaia- III. Detection limits for ultrafaint dwarf galaxies". Antoja, T.; **Mateu, C.**; Aguilar, L.; Figueras, F.; Antiche, E.; Hernández-Pérez, F.; Brown, A. G. A.; Valenzuela, O.; Aparicio, A.; Hidalgo, S.; Velázquez, H. *Monthly Notices of the Royal Astronomical Society*, **2015**, Vol. 453, 541-560.
4. "The number fraction of discs around brown dwarfs in Orion OB1a and the 25 Orionis group". Downes, Juan José; Román-Zúñiga, Carlos; Ballesteros-Paredes, Javier; **Mateu, Cecilia**; Briceño, César; Hernández, Jesús; Petr-Gotzens, Monika G.; Calvet, Nuria; Hartmann, Lee; Mauco, Karina. *Monthly Notices of the Royal Astronomical Society*, **2015**, Vol. 450, 3490-3502.
5. "On the recovery of galaxy properties from SED fitting solutions". Magris, Gladis; Mateu, J.; **Mateu, Cecilia**; Bruzual, Gustavo; Cabrera-Ziri, Iván; Mejía-Narváez, Alfredo. *Publications of the Astronomical Society of the Pacific*, **2015**, 127, 16-30.
6. "Searching for tidal tails around Omega Centauri using RR Lyrae Stars". Fernández-Trincado, J. G.; Vivas, A. K.; **Mateu, Cecilia**; Zinn, R.; Robin, A. C.; Valenzuela, O.; Moreno, E.; Pichardo, B. *Astronomy & Astrophysics*, **2015**, 574, A15-A26.
7. "The low mass star and sub-stellar populations of the 25 Orionis group". Downes, Juan José; Briceño, César; **Mateu, Cecilia**; Hernández, Jesús; Vivas, Anna Katherina; Calvet, Nuria; Hartmann, Lee; Petr-Gotzens, Monika G.; Allen, Lori. *Monthly Notices of the Royal Astronomical Society*, **2014**, Vol. 444, 1793-1811.
8. "Characterizing the Galactic warp with Gaia - I. The tilted ring model with a twist". Abedi, Hoda; **Mateu, Cecilia**; Aguilar, Luis A.; Figueras, Francesca; Romero-Gómez, Mercè. *Monthly Notices of the Royal Astronomical Society*, **2014**, Vol 442, 3627
9. "The QUEST RR Lyrae Survey: III. The Low Galactic Latitude Catalogue". **Mateu, C.**, Vivas, K., Downes, J., Briceño, C., Zinn, R. Y Cruz-Diaz, G. *Monthly Notices of the Royal Astronomical Society*, Vol 427, 3374, **2012**.

10. "Detection of Satellite Remnants in the Galactic Halo with Gaia - II. A modified Great Circle Cell Method". **Mateu, C.**, Bruzual, G., Aguilar, L., Brown, A. G. A., Valenzuela, O., Carigi, L., Hernández, F., Velázquez, H. *Monthly Notices of the Royal Astronomical Society*, **2011**, 415, 214
11. "No excess of RR Lyrae stars in the Canis Major Overdensity". **Mateu, C.**, Vivas, K., Zinn, R. y Miller, L. *The Astronomical Journal*, **2009**, 137, 4412
12. "Spectroscopy of Bright QUEST RR Lyrae stars: Velocity substructures toward Virgo". Vivas, K. Jaffé, Y., Zinn, R., Winnick, R., Duffau, S., **Mateu, C.** *The Astronomical Journal*, **2008**, 136, 1645

## PROCEEDING CONTRIBUTIONS

1. "Detectability of Ultra Faint Dwarf Galaxies with Gaia". Autores: **Mateu, C.**; Antoja, T.; Aguilar, L.; Figueras, F.; Brown, A.; Antiche, E.; Hernández-Pérez, F.; Valenzuela, O.; Aparicio, A.; Hidalgo, S.; Velázquez, H. EAS Publications Series, Volume 67-68, pp. 385, 2014
2. "Detecting Halo Substructures in the Gaia Era". Autores: **C. Mateu**, L. Aguilar, G. Bruzual, A. Brown, O. Valenzuela, L. Carigi, H. Velázquez, F. Hernández. *Revista Mexicana de Astronomía y Astrofísica (serie de conferencias)*, Vol. 43, Pág. 63-67, 2014
3. "On the Recovery of Galaxy Properties from Spectral Fits". Magris, G.; **Mateu, C.**; G. Bruzual, A.; Cabrera, I. *Proceedings of "the International Astronomical Union, IAU Symposium*, Vol. 295, 317, 2013.
4. "Searching for RR Lyrae stars around omega Centauri (NGC5139)". Fernández Trincado, J. G.; Vivas, A. K.; **Mateu, C.**; Zinn, R. *Memorie della Societa Astronomica Italiana*, Vol 84, 265, 2014.
5. "Gauging the Galactic Thick Disk with QUEST RR Lyrae stars". **Mateu, C.**, Vivas, K., Downes, J., Briceño, C. *Publicado en European Physics Journal Web of Conferences*, Vol. 19, 04006, 2012.
6. "A Bayesian approach to quantify the uncertainties in the determination of galaxy properties derived from spectral fits". Magris, G., **Mateu, C.** y Bruzual, G.. *Proceedings of the International Astronomical Union, IAU Symposium*, Vol. 284, Pg. 46-48, 2012
7. "Detecting Stellar Streams in the Galactic Halo with a Modified GC3 Method" **Mateu, C.**; Bruzual, G.; Aguilar, L.; Brown, A.; Valenzuela, O.; Carigi, L.; Hernández, F.; Velázquez, H. *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 40, Pg. 280, 2011
8. "Measuring the Galactic Thick Disk with QUEST-I RR Lyrae stars". **Mateu, C.**; Vivas, A. K.; Downes, J. J.; Briceño, C. *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 40, Pg. 245, 2011

9. "The CIDA-VISTA Survey in Orion OB1". Briceño, C.; **Mateu, C.**; Downes, J. J.; Vivas, A. K.; Hernández, J.; Calvet, N. Publicado en la *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 40, Pg. 225, 2011
10. "The formation and early evolution of brown dwarfs viewed through the Orion dispersed populations". Downes, J. J.; Briceño, C.; **Mateu, C.**; Hernández, J.; Calvet, N.; Hartmann, L. *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 40, Pg. 217, 2011
11. "The QUEST RR Lyrae Survey of the Canis Major Overdensity". **Mateu, C.**; Vivas, A. K. *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 35, Pg. 105, 2009
12. "The QUEST RR Lyrae survey of the Canis Major overdensity". **Mateu, C.**; Vivas, K.; Zinn, R. Publicado en *Proceedings of the IAU Symposium 254, "The Galactic Disk in a Cosmological Context"*, Pg. 242, 2009
13. "Substructures in the Milky Way's Halo towards Virgo". Vivas, A.K.; Jaffé, Y.; Zinn, R.; Winnick, R.; Duffau, S. y **Mateu, C.** *Revista Mexicana de Astronomía y Astrofísica, Serie de Conferencias*. Vol 35, Pg. 125, 2009
14. "A search for RR Lyrae stars in the Canis Major Overdensity". **Mateu, C.**, Vivas, K., Zinn, R. y Miller, L. *Proceedings of the IAU Symposium 241, Anales del congreso "Stellar Populations as Building Blocks of Galaxies"*, Pg. 359, Cambridge University Press, 2007.
15. "RR Lyrae Search and Stellar Populations Study in Canis Major: Preliminary Results". **Mateu, C.**, Vivas, K., Zinn, R. y Miller, L. *Revista Mexicana de Astronomía y Astrofísica, Memorias del congreso Astronomía Dinámica en América Latina*, Vol. 25, Pg. 18, 2006.

## PARTICIPATION IN INTERNATIONAL MEETINGS

1. "Predictions for the detection of tidal streams with Gaia and great circle methods", Oral Contribution and "PyMGC3 – A Python Toolkit for stream finding with the mGC3 family of methods", **Invited Practical Lesson**. IV Gaia Challenge Meeting, Stockholm, Sweden, October, 2016.
2. 'Searching for ghosts of mergers past with Gaia'. **Invited Talk at the 'XV Latin American Regional Meeting of the International Astronomical Union'**, Cartagena, Colombia, October, 2016.
3. "Searching for substructure: the GC3 family of great circle methods". Oral contribution presented at the 'Workshop on the Impact of Gaia on the Structure and Dynamics of the Milky Way Galaxy', Mexico City, Mexico, June, 2016.
4. 'Detectability of Tidal Streams in Cosmological Simulations with Gaia and Great Circle Cell Methods'. **Oral Contribution** presented at the **invitation-only** meeting 'Stellar Streams in the Local Universe', Ringberg, Germany, July 2015.

5. 'Detectability of Ultra Faint Dwarf Galaxies with Gaia'. Poster contribution at the meeting "The Milky Way Unravelling by Gaia", Universidad de Barcelona, Barcelona, Spain, December 2014.
6. "Halo and Thick Disk structure traced with RR Lyrae stars", Oral contribution at the meeting "XXV Congreso Nacional de Astronomía", México City, México, October 2013.
7. "Investigación en Astronomía en Venezuela", Invited Oral contribution at the meeting "Workshop de Astronomía en Los Andes", Universidad de los Andes Bogotá, Colombia, July 2013.
8. "Detectando Subestructura en el Halo Galáctico en la Era de Gaia". **Invited contribution** at the meeting "Astronomía Dinámica en Latinoamérica". Universidad de La Plata, Argentina, March 2012
9. "Gauging the Galactic Thick Disk with QUEST-I RR Lyrae stars". Poster contribution presented at the IAU Symposium "Assembling the Puzzle of the Milky Way Galaxy". March 2011
10. "Measuring the Galactic Thick Disk with QUEST-I RR Lyrae stars". Oral contribution presented at the IAU Regional Latin American Meeting, Morelia. México. November 2010.
11. "Tidal Stream Detection in the Gaia Era: A Modified Great Circle Method". Poster contribution presented at the IAU Regional Latin American Meeting, Morelia. México. November 2010.
12. "Identificación de Corrientes Estelares en el Halo de la Galaxia". Oral contribution at the meeting XXIII Congreso Nacional de Astronomía, IA-UNAM, Ensenada, México. September 2009.
13. "The QUEST RR Lyrae survey of the Canis Major Overdensity". Poster contribution at the IAU Symposium "The Galaxy Disk in a Cosmological Context", Copenhagen, Dinamarca. June 2008.
14. "The QUEST RR Lyrae survey of the Canis Major Overdensity". Oral contribution presented at the IAU Regional Latin American Meeting, Isla Margarita. October 2007.
15. "A search for RR Lyrae stars in the Canis Major Overdensity". Poster contribution at the IAU Symposium "Stellar Populations as Building Blocks of Galaxies", La Palma, Canary Islands. December 2006.
16. "Estudio de poblaciones estelares y búsqueda de RR Lyrae en la sobredensidad de Can Mayor". Contribución oral en el congreso *Astronomía Dinámica en América Latina*, CIDA. November 2004.

## **PARTICIPATION IN NATIONAL MEETINGS**

1. "Detección de Corrientes Estelares en el Halo de la Vía Láctea en la Era de Gaia". Oral contribution presented at the *Reunión Venezolana de Astronomía 2012*, Centro de Investigaciones de Astronomía, December 2012.

2. "Develando la forma del Disco Grueso de la Vía Láctea desde el Observatorio Astronómico Nacional". Oral contribution presented at the *Reunión Venezolana de Astronomía 2010*, Centro de Investigaciones de Astronomía, December 2010.
3. "El sondeo QUEST de RR Lyrae en el Disco Grueso de la Vía Láctea". Oral contribution presented at the *Sociedad Venezolana de Física 2010*, Universidad Central de Venezuela, December 2010.
4. "Estudio de la Población de estrellas RR Lyrae en la sobredensidad de Can Mayor". Oral contribution presented at the *Sociedad Venezolana de Física 2007*, Universidad de Los Andes, December 2007.
5. "Sondeo QUEST de RR Lyrae en la sobredensidad de Can Mayor". Oral contribution presented at the *Reunión Venezolana de Astronomía 2006*, Centro de Investigaciones de Astronomía, March 2006.

## **ATTENDANCE TO SCHOOLS AND INTERNATIONAL WORKSHOPS**

1. 'Il Gaia Challenge Workshop', Max Planck Institute for Astronomy, Heidelberg, Germany, Oct 27 to 31 2014.
2. 'Bayesian Computing for Astronomical Data Analysis', Penn State University, Pennsylvania, USA, June 11 to 13 2014.
3. 'Statistical Modelling of Cosmic Populations', Penn State University, Pennsylvania, USA, June 9-10 2014.
4. "Galactic Dynamics in the Era of Gaia", Novembre 4 to 12 2014, México DF, México.
5. "GREAT School on the Science and Techniques of Gaia", January 23 to 27 2012, Lorentz Center, Leiden, Netherlands.
6. "GREAT School on Astrostatistics and Data Mining", May 30 to June 3rd 2011, La Palma, Spain, organized by the Universidad Nacional de Educación a Distancia (España) and Gaia Research for European Astronomy Training.
7. "XX Canary Islands Winter School: Local Group Cosmology", Novembre 17 to 28 2008, Tenerife, Spain, organized by the Instituto de Astrofísica de Canarias.
8. "IV NVO Summer School", Septiembre 2 to 10, 2008, Santa Fe, New Mexico, USA, organized by the National Virtual Observatory.
9. "Escuela Internacional de Astronomía", Centro de Investigaciones de Astronomía, Octubre 15 to 19, 2007.
10. "37th Saas-Fee School: The Origin of the Galaxy and the Local Group", March 4 to 10, 2007, Mürren, Switzerland.
11. "III Advanced Chilean School for Astronomy and Astrophysics: Insights into Galaxy Evolution from Resolved Stellar Populations", January 8 to 12, 2007 Universidad de Concepción, Concepción, Chile.

12. "International School on Galactic and Cosmological N-body Simulations", July 23 to August 5, 2006, Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE), Tonanzintla, Puebla, México.
13. "Coloquio de Discos en Estrellas Jóvenes", March 17th, 2006, Centro de Investigaciones de Astronomía, Mérida, Venezuela.
14. "International IAU School for Young Astronomers", July 25 to August 12, 2005, organized by the International Astronomical Union (IAU) at the Instituto Nacional de Astrofísica, Óptica y Electrónica (INAOE), Tonanzintla, Puebla, México.
15. "Yale Summer Workshop on Basic Astrometric Methods", July 18 to 22, 2005, Yale University, New Haven, Connecticut, USA.
16. Inaugural event for the "World Year of Physics 2005", representing the Universidad Simón Bolívar, Jan 10 to 14 2005, UNESCO Headquarters, Paris, France
17. "VIII Escuela de Relatividad, Campos y Astrofísica", Universidad de los Andes, Novembre 3 to 8, 2002.

## TEACHING

1. Organizer of the CIDA Summer Academic Program 2017 (Programa Universitario de Astronomía - PUA) to be held at CIDA during August 2017
2. "An Introduction to Bayesian Statistics through Astronomical Applications" (6 academic hours). Short course (8 hours) taught at the Universidad de Barcelona, October 2016.
3. Organizer of the CIDA Summer Academic Program 2016 (Programa Universitario de Astronomía) 2016, held at CIDA. August 2016
4. Regular professor of the "Introduction to Astronomy" course, taught during the fall 2011 semester at the Universidad de Los Andes and during the Summer Academic Program (Programa Universitario de Astronomía) CIDA 2009, 2011, 2012, 2013 and 2016. Topics imparted: stellar clusters, variable stars, the Milky Way, the distance scale, interstellar medium, galaxies.
5. "An Introduction to Bayesian Statistics through Astronomical Applications" (6 academic hours). Short course (10 hours) taught at the Instituto de Astronomía, Universidad Autónoma de México, January 2015.
6. "Introduction to Bayesian Statistics through Astronomical Applications" (6 academic hours). Short course (8 hours) taught at the Universidad de Barcelona, November 2014.
7. "Introduction to Numerical Methods in Astronomy" (6 academic hours per week, 16 weeks). Taught during the september 2012-february 2013 semester at the Postgrado de Física Fundamental de la Universidad de Los Andes, Merida, Venezuela.
8. Course "La Vía Láctea en tres Perspectivas: Poblaciones Estelares" (9 hours plus 6 lab hours) taught during the III Escuela Venezolana de Astronomía, CIDA, December 10 to 15, 2012

## **THESIS AND INTERNSHIP ADVISING**

1. Advisor for the Summer Internship of Jonathan Arredondo. CIDA Summer Academic Program 2016.
2. Advisor of the Master's Thesis 'Caracterización y búsqueda de la población de binarias eclipsantes en el catálogo QUEST', presented by Bolivia Cuevas, accepted October 2014. Postgrado en Física Fundamental, Universidad de Los Andes, Merida, Venezuela.
3. Advisor for the Summer Internship of Juan Nicolás Garavito. CIDA Summer Academic Program 2013.
4. Advisor for the Summer Internship of Nairy Villarreal. CIDA Summer Academic Program 2012.
5. Advisor for the Summer Internship of Bolivia Cuevas. CIDA Summer Academic Program 2011.

## **THESIS EVALUATION COMMITTEES**

1. Member of the M.Sc. Thesis evaluation committee for Jairo Alzate at the Instituto de Radioastronomía y Astrofísica, Morelia, Mexico, January 2017

## **MEMBERSHIP IN MEETING ORGANISING COMMITTEES**

1. Member of the Local Organising Committee of the V Reunión Venezolana de Astronomía, held at CIDA, December 5 to 7, 2012
2. Member of the Local Organising Committee of the III Escuela Venezolana de Astronomía, held at CIDA, December 10 to 15, 2012

## **SCHOLARSHIPS AND DISTINCTIONS**

1. Recipient of the Doctoral Scholarship granted by the *Academia Nacional de Ciencias Físicas, Matemáticas y Naturales* de Venezuela, from september 2005 until june 2010.